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# Supreme Court of the United States.

No. 148.—October Term, 1902.

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| The Kokomo Fence Machine Company *vs.* Alva L. Kitselman and Davis M. Kitselman. | On writ and cross writ of certiorari to the United States Circuit Court of Appeals for the Seventh Circuit. |

[March 23, 1903.]

This was a suit in the Circuit Court of the United States for the District of Indiana for infringement of claims 1, 2, 3, 9, 10, 11, 15 and 20 of letters patent No. 356,322, issued January 18, 1887, to Alva L. Kitselman and Davis M. Kitselman for an improvement in wire fabric machines; of claims 1 and 2 of letters patent No. 289,507, issued December 4, 1883, to W. J. Davisson for an improved machine for making wire fabrics; of claims 2, 3 and 4 of letters patent No. 357,067, issued February 1, 1887, to Theodore M. Connor for improvement in machines for forming netted wire fabrics; and of claims 1 and 10 of letters patents No. 505,607, issued September 26, 1893, to John C. Pope, for wire fabric machines.

Defendants denied patentable novelty of each of the patents, and also denied infringement, and alleged that they constructed their wire fabrics as licensees under and pursuant of letters patent No. 502,025, issued to W. D. Whitney, December 24, 1895, for improvements in wire fabric machines.

The cause was heard by District Judge Baker, who held that the claims of the four patents sued on were for specific constructions, which defendants did not use, and that there was no infringement of either of the letters patent, and dismissed the bill. The case was carried to the United States Circuit Court of Appeals for the Seventh Circuit, and that court, one of its members dissenting, reversed the decree, and held that the defendants had infringed the first, second, eleventh and fifteenth claims of the patent issued to the Kitselmans. 108 Fed. Rep. 632.

The writ of certiorari was granted on the petition of the Kokomo Fence Company, and afterwards the cross writ on the petition of the Kitselmans. The Machine Company alleged error in the judgment of the Court of Appeals sustaining and finding infringement of the Kitselman patent, and the Kitselmans alleged error in that court in not sustaining and finding infringement of the Davisson, Connor and Pope patents.

Mr. Chief Justice Fuller delivered the opinion of the Court:

The Circuit Court was of opinion that neither of complainants' patents was a pioneer invention; that they were all merely improvements on the

prior art, and to be construed in that light; that complainants could not be treated on the basis that they or their assignors were the first to make a portable machine for weaving wire fencing fabric in the field, which claim had been distinctly made by complainants, rejected by the Patent Office, and the claim thereupon withdrawn. In its judgment, complainants and defendants contended as to infringement on an equal field, the presumption of the validity of complainants' patents being met by the presumption of the validity of the patent to Whitney. And, taking up complainants' patents *seriatim*, the Circuit Court held that the differences between their machines and defendants' machine were not mere colorable invasions by the latter, and that the identity of means and of operation essential to infringement were lacking.

The Circuit Court of Appeals concurred with the Circuit Court that the case turned upon the question whether the patents sued on embodied a pioneer invention; that if complainants' invention was not of a primary character, a substantial departure from the machines of the prior art, defendants' machine was so sufficiently differentiated that the claim of infringement could not be maintained; while, on the other hand, if complainants' patents "were the first to give to the world a workable, portable machine for weaving wire fences in the field—a machine distinctly creating a new product—and aptly embody in their specifications and claims the mechanical arrangements that bring about such a result, the decree below is erroneous."

The opinion was preceded by an extended statement of facts, which gave the specifications of the Davisson patent of December 4, 1883, and certain of the accompanying figures, together with the second and third claims, alleged to be infringed; also "the pertinent drawings and specifications of the Kitselman patent," and the claims alleged to be infringed, which were as follows:

"1. In a wire-fabric machine, a series of sectional twisters, each of which comprises a central section for carrying a warp-wire, and having rotary movement imparted thereto, and the shifting sections for carrying the weft-wire, and receiving rotary motion from the central section to form the twist, substantially as and for the purpose herein described.

"2. In a wire-fabric machine, the combination of a series of sectional twisters geared together for simultaneous rotation, and each comprising a central portion movable only on its axis and side portions capable of a compound movement—that of rotation on their axes—and of a shifting longitudinal movement, substantially as described, for the purpose set forth."

"9. In a wire-fabric machine, the series of sectional twisters, comprising the central and side sections, the central section of each twister being geared to the twister adjacent thereto for simultaneous operation, substantially as described, for the purpose set forth.

"10. In a wire-fabric machine, the combination of a series of twisters geared directly together for simultaneous operation, and each comprising a

central section and the side section, each side section carrying a spool or reel for the wire, substantially as described, for the purpose set forth.

"11. In a wire-fabric machine, a series of twisters connected for simultaneous operation, and each consisting of a central section and the side section, in combination with the spools carried by the side sections, the central section of each twister being provided with a longitudinal opening for the passage therethrough of the warp-wire, substantially as described."

"15. In a wire-fabric machine, the combination of a series of rotary twisters geared directly together for simultaneous operation, each twister having a central section capable of rotary movement only, and two side sections which are capable of a shifting movement independently of the central section in opposite directions simultaneously, whereby the said shifting sections of one twister are adjusted to register with the central sections of twisters on opposite sides of the same, substantially as described, for the purpose set forth."

"20. In a wire-fabric machine, a series of sectional twisters, each comprising a central section, the central sections being geared together to be simultaneously rotated on their axes, and the shifting side sections adapted to align with the central sections to be rotated therewith, substantially as described, for the purpose set forth."

The drawings and specifications of the Connor and Pope patents were not set out because unnecessary in the view taken of the case. Both these patents were issued subsequently to the Kitselman patent.

The drawings and specifications of the patent to Whitney of December 24, 1895, were then given.

The statement further set forth "the essential drawings and specifications of letters patent No. 10,743, granted John Nesmith, April 4, 1854, and referred to in the opinion as most adequately representing one branch of the prior art," namely, as stated by the court, loom machines by which wire netting was made in the factory, and then transferred to the field; and also Figure 2 of the drawings of the Middaugh and Wilcox patent of December 23, 1884, that patent being regarded as "the best example of the second branch of the prior art," field machines which constructed the fence *in situ*.

The statement is given in full, with eleven pages of drawings in the report of the case, 108 Fed. Rep. 632.

The Kitselman and Pope patents described portable machines. The Davisson and Connor patents described stationary machines. The Kitselman and Pope patents were intended to be operated by hand and the Davisson and Connor patents were intended to be operated by power. But the essentials of the mechanism were not dependent upon the circumstance of their being embodied in either a stationary or a portable machine, or in a power or a hand machine. Complainants' leading expert testified that "the essentials of the invention described in the several claims here in suit are not dependent on their use in a stationary or portable machine, or in a power or hand machine, or upon their capacity to weave a fabric into

which slats may or may not be used, or upon their capacity to weave a fabric of any special size of mesh."

In the specification of the Kitselman patent the inventor said: "The primary object I have in view in my invention is to provide a simple and easily-operated machine of the class named which can be adapted for use in the open field or other place for the construction of fences, as well as a stationary or fixed machine for the manufacture of wire fabric." And also: "I may either construct a portable machine as shown in the accompanying drawings, to work in the open field or other place, or dispose the parts in a horizontal instead of a vertical position, and mount the same on suitable bearings and legs to provide a stationary machine for indoor use."

The Middaugh and Wilcox patent of December 23, 1884, was a patent for a "Portable Fence Machine," described in the claims as "a portable machine for constructing wire-and-picket fences" and "a portable fencing machine." Longitudinal pairs of wires were intertwisted with vertical slats inserted between the twists, the wires passing through tubes or spindles in the frame of the machine, which moved along the wires as the fence was formed.

In the Kitselman specifications and drawings, plans of picket and slat fencing and of the common form of wood fence held together by wires, as made by that machine, were shown. The Middaugh and Wilcox machine made wire and picket fence. The Kitselman machine made diamond mesh, and wire and picket, fence. But the diamond mesh fabric was old, as shown not only in the Davisson patent but in many others antedating those in suit, as, for instance, that of Nesmith of April 4, 1854.

The diamond mesh fabric had been woven while the machine was in a standing position. The Middaugh and Wilcox patent made wire and picket fence in the field. Kitselman converted the stationary into a portable machine by setting it on end and mounting it on a truck; and he converted the portable machine, as he himself says, by disposing the parts "in a horizontal instead of a vertical position," and mounting "the same on suitable bearings to provide a stationary machine for indoor use." The mechanism and operation were the same. Whatever its merits, it was not in itself primary invention to mount a machine for making diamond mesh fencing on a truck, and using it in the field, as the old machine had been used to make wire and picket fences. The getting up and walking was not new, though the machine may have gone at a better gait and made a better fence.

When Kitselman made his original application, his nineteenth claim read: "In a wire-fabric machine, the combination of a track, a carrying frame geared to the track, and having the twisting devices and the reels, and pawl and ratchet mechanism for feeding the frame and its devices,

substantially as described, for the purpose set forth." This claim was rejected by the Patent Office on reference to the Fultz patent of May 13, 1884, and the Watson patent of July 21, 1885.

Fultz' was a patent for "an upright machine for making or weaving fence composed of wire and pickets, and may be used, movably, along the line where the fence is to be made, or stationary."

Watson's was a patent for a wire fence machine, the invention relating "to that class of fence-machines in which the pickets and wires are bound together and the fence put up in one operation."

Kitselman acquiesced in the rejection and withdrew his nineteenth original claim, and cannot now reasonably claim a construction which would protect his machine as a pioneer field machine.

The first, second, eleventh and fifteenth claims of the Kitselman patent were held by the Circuit Court of Appeals to be infringed. We repeat these claims as follows:

"1. In a wire-fabric machine, a series of sectional twisters, each of which comprises a central section for carrying a warp-wire, and having rotary movement imparted thereto, and the shifting sections for carrying the weft-wire, and receiving rotary motion from the central section to form the twist, substantially as and for the purpose herein described.

"2. In a wire-fabric machine, the combination of a series of sectional twisters geared together for simultaneous rotation, and each comprising a central portion movable only on its axis and side portions capable of a compound movement—that of rotation on their axes—and of a shifting longitudinal movement, substantially as described, for the purpose set forth."

"11. In a wire-fabric machine, a series of twisters connected for simultaneous operation, and each consisting of a central section and the side section, in combination with the spools carried by the side sections, the central section of each twister being provided with a longitudinal opening for the passage therethrough of the warp-wire, substantially as described."

"15. In a wire-fabric machine, the combination of a series of rotary twisters geared directly together for simultaneous operation, each twister having a central section capable of rotary movement only, and two side sections which are capable of a shifting movement independently of the central section in opposite directions simultaneously, whereby the said shifting sections of one twister are adjusted to register with the central sections of twisters on opposite sides of the same, substantially as described, for the purpose set forth."

It is obvious, as said by complainants' expert, "that the terms 'sectional twisters' 'twisters' and 'rotary twisters,' used in the several claims under consideration, refer to the same three-part twister devices."

In Kitselman's original application, the first claim called for "a series of sectional twisters geared directly together;" the second, for "a series of sectional twisters capable of sliding movement with relation to each other and geared for simultaneous rotation;" the third, for "the series of sectional twisters comprising the central hub section and the two side sections disposed on opposite sides of the central section, the hub section being

stationary, while the side sections are capable of shifting movement;" the fourth, for "the series of sectional twisters, each of which comprises a longitudinally immovable section and two sections which have longitudinal movement;" the fifth, for "the series of sectional twisters, each of which comprises the central portion carrying the warp-wires and the shifting side sections which carry the weft-wires."

The first and second claims were rejected, and thereupon erased, and others substituted, which were likewise rejected, (the Nesmith patent of 1854 being cited,) were withdrawn, and the numbers of original claims 3, 4 and 5 were changed to 1, 2 and 3. The latter were then rejected on reference to the Smith British printed publication of 1876, withdrawn, and claim 1 as it now stands submitted. That publication, which was a provisional specification, described a two-part twister, and added: "Or I divide the twisting wheels into three parts, my extra wire passing through the central division, and the two side segments travel to and fro to form the twist, leaving the central division in position with my supplementary wire therein maintained."

The two substituted claims above mentioned as rejected on reference to Nesmith, and withdrawn, read as follows:

"1. In a wire-fabric machine, a series of rotary twisters geared directly together for simultaneous rotation and each having two sections which are capable of a sliding movement, substantially as described, for the purpose set forth.

"2. In a wire-fabric machine, the combination of a series of rotary twisters geared directly together, substantially as described, for the purpose set forth."

The Nesmith patent described a machine comprising two separate but simultaneously operating parts, termed in the patent the "feeder" and the "twister." It was a loom machine, so called, and adapted to produce the wire netting and wrap it about suitable rolls. The feeder was a complete device for supporting the warp wires, and supporting, rotating and shifting the woof wires, provided with a take-up roll mounted on the front end of the "twister." It comprised a rectangular frame, together with operating mechanism supported thereon. At the front and rear were five gears in successive engagement, and means were provided for simultaneously rotating both series.

The specification stated that the border wires of the netting were placed on reels supported on the frame of the machine, and these passed through holes drilled in the center of the outside gears; and also showed that the gears, other than the outermost ones, were perforated for the passage of wires in case it was desired to make a narrower fabric. Each of the outside gears was formed with two opposite radial slots, extending inward from the margin sufficient to form recesses which received the ends of spool-carrying frames, each carrying a woof-wire spool, the front end of

each frame being seated in the marginal slot of one of the gears, and the rear end in the corresponding slot of the corresponding gear. When all the gears on their spindles or hubs were so adjusted as to bring the slots into the same horizontal line any spool-carrier might be transferred from its supporting gears to the gears next adjacent to those which supported its front and rear ends. When the spool-carriers of the machine were arranged in pairs on the alternate gears the rotation of all the gears rotated each pair of spool-carriers about a common axis, and when the two spool-carriers on one pair of gears were shifted in opposite directions to the two pairs of gears on the opposite sides of the pair previously forming the support of the spool-carriers a remating of the spool-carriers was effected, and the next rotation of the gears rotated each newly formed pair of spool-carriers about a common axis coincident with the axis of the supporting gears. As a means of transferring the spool-carriers the machine was provided with "shippers," together with means for sliding them vertically, one of the "shippers" being adapted to transfer the spool-carriers in one direction and the other being adapted to transfer them in an opposite direction or back to their position. Each of the shippers consisted in a series of wedges supported in a suitable frame and having inclined faces adapted to impinge upon the side faces of the end portion of the spool-carrying frames, the corresponding faces of the wedges being oppositely inclined in order to impart to them the reverse movement.

There were in effect five rotating centers, each gear in the front series with the corresponding gear in the rear series acting as a single rotating part or center. The number of spool-carriers was one less than the number of centers in use, the number of rotating centers being five and the number of spool-carriers being four. In the rotation of the centers the two outermost centers would each support a single spool-carrier, and the central rotating center would support two spool-carriers. The rotation of the gears when the spools had the first arrangement would wrap the outer woof-wires about the marginal warp wires and intertwist the other two warp wires at the center of the machine; and the rotation of the gears after the spool-carriers had been shifted to the second and fourth rotating centers intertwisted the first and second wires in front of the second center and the third and fourth wires in front of the fourth center. The repetition of this operation formed the fabric.

The Circuit Court of Appeals pointed out that in the Davisson patent the supplemental mechanism of Nesmith was dispensed with and that the diamond mesh was made by a shifting of the reels instead of the wires.

In respect of the differences between Davisson and Kitselman the court stated:

"The spindles of the Davisson machine were arranged vertically; had, with reference to the Davisson machine, a longitudinal movement; and were alternately forced forward and withdrawn from the plane of operation

by means of a shifting device that was necessarily bulky and impracticable for field use. The Kitselman spindles were horizontally placed; had no longitudinal or lateral movement; and were confined permanently to the plane of their rotation. In the Davisson machine, as in the Kitselman, the spindle, with its reels, acts as the twisting agent, the spindle forming the rotator; but in the Davisson machine the spindle, where the warp wire emerges from its hollow center, stands well back from the reels, thus allowing the warp wire to go unsupported to the plane of operation; while in the Kitselman machine the spindle extends clear forward to the twisting zone, to which it carries, through its hollow center, the warp wire fully supported against side pulls. In the Davisson machine the spool-carriers are transferred to their adjacent spindles by means of an apparatus previously described as involving a longitudinal and transverse motion. Kitselman effects the transfer of his spool-carriers by shifting the one to the spindle above the spindle with which it has just operated, and the other to the spindle below. This shifting, being brought about by a longitudinal motion only, thus eliminating the necessity of a transverse motion.

"In the Davisson invention a simple gear is set behind each spindle, but none of these gears engage each other, so that, when the spool-carriers are shifted to adjacent spindles and cross-heads at each successive twist, they are revolved about a practically new center. Kitselman provided each twister at its central section with a spur gear of sufficient diameter to engage the gears of the adjacent twisters, and by this means imparted a simultaneous motion to the whole series of twisters. The gear arrangement of the Davisson machine tends to twist the opposing carriers out of alignment; subjects the central wire to certain deflection; and pulls the woof wires somewhat from their intended direction. In the Kitselman machine the pull, incident to the twisting operation, is constantly equalized, the central portions of the twisters offsetting each other in the plane in which the strain comes.

"These distinctions are, to a certain extent, subsidiary, but nevertheless important."

In view of what passed in the Patent Office, and the state of the art, we cannot regard the Kitselman patent as a pioneer patent, but think its claims must be limited in their scope to the actual combination of essential parts as shown, and cannot be construed to cover other combinations of elements of different construction and arrangement.

Passing then to the question of infringement, we avail ourselves of the description of the Kitselman patent by defendant's expert as sufficiently comprehensive to enable us to indicate our views on that question. He says:

"The Kitselman machine has a frame made up of three vertical rigidly connected members forming respectively the front and rear walls of the frame and an intermediate wall somewhat nearer to the rear member than to the front. The front and intermediate members of the frame may each be made of two parallel bars, or may be each a single bar having a vertical slotted center; and the rear member may be either open or solid, as may be desired. . . . A series of rotatable horizontal hollow spindles are mounted in suitable bearings in the rear and intermediate members of the frame and are provided with gears in successive engagement with each

other, each gear being rigidly fastened on its spindle, so that the rotation of the gear must rotate the spindle. One of the gears of the series is provided with a bevel gear rigidly fastened to it and this gear is in engagement with a bevelled pinion mounted on a crank shaft, the crank shaft in turn being provided with a suitable crank and handle for its rotation and for the consequent rotation of all the gears of the series.

"Each of the rotatable spindles is formed with a flat forward extension in the form of a skeleton frame made up of two transverse members and two longitudinal members, the whole being formed in a single piece and being of such length that the transverse members of each flat extension lie respectively, one just in rear of the front member of the frame and the other just in front of the intermediate member of the frame. These forward extensions, which are supported by and rotate with the shafts, have their respective axes coincident with the axes of the hollow shafts; and the two transverse members of each of the forward extensions are centrally bored, in line with the bore of the corresponding shaft, so that warp wires may pass in horizontal lines through the rotatable shafts and their forward extensions. The machine is provided with a series of spool-carriers, each of which may carry a woof-wire spool; and each of these spool-carriers is a single-piece casting of the same length as the forward extension on each of the shafts. Each such casting consists of a flat longitudinal member adapted to lie side by side with the flat longitudinal bars of any one of the forward extensions of the rotatable spindles, and two segmental heads or ends each adapted to lie with its flat side against the corresponding transverse member of any one of the forward extensions of the rotating spindle. The segmental heads of the spool-carrier castings are of such dimensions that when two of the castings are placed on opposite sides of any one of the forward extensions of the rotatable spindles, the two segments and the intermediate transverse member of the spindle extension between them, form a complete circle at either end of the compound three-part structure made up of the spindle extension and the two spool-carrier castings. Each of the spool-carrier castings is adapted to receive and support a woof wire; and it is evident that if two of the castings, with their spools, be held at any time in fixed connection with one of the spindle extensions between them, the rotation of the spindle and its extension must rotate the spool-carrier castings and their spools. The segments at the ends of each spool-carrier casting are similar; but only one of them is perforated for the passage of the woof wire from the spool; and this segment is in use, made the front end of the spool-carrier. It is clear that the rotation of any given spindle and its extension, with two spool-carriers lying on opposite sides of the extension and in connection therewith, must intertwist the woof wires from the two spools, at a point in front of the front end of the spindle extension; and it is further evident that if the machine is to make the diamond-mesh fabric, means must be provided for shifting the spool-carriers to and fro between the adjacent spindle extensions or rotating centers which effect the rotation of the spool-carriers.

"For the purpose of holding the spool-carrier frames temporarily in registration or engagement with the rotating spindle extensions, and for the further purpose of shifting the spool-carriers, in order to remate the woof wires, the machine is provided with two vertically reciprocating guides or shifters, one on either side of the vertical plane of the axes of the spindles and their extensions. Each of these guides is made up of two

rigidly connected vertical bars, one just in rear of the front member of the frame, and the other just in front of the intermediate member of the frame, each of the bars being provided with a series of castings, extending inward toward the central plane of the machine and each terminating at its inner end in a re-entrant segmental curve adapted to conform to the segmental margin of any one of the heads of the carrier frames or castings. These castings lie in the planes of the segmental heads of the carrier frame; and when the two guides or shifters on opposite sides of the machine are so adjusted that their castings are directly opposite each other, the curved edges of any two opposite castings are arcs of a common circle and will practically enclose and hold in working relation, as a complete circle, the two segmental carrier frame heads lying between them, together with their interposed transverse member of the spindle extension. The consequence is, that the carrier frames may be arranged in pairs on the alternate spindle extensions of the machine and held in place by the curved edges of the castings on the guides or shifters, the two curved edges of any opposite pair of such castings forming a circular guide adapted to hold the three parts of the corresponding circle of the twister in proper relation to each other while they are rotated; and when the parts are thus arranged, the rotation of the spindle must evidently effect the rotation of the three-part twisters with their spools and thereby intertwist the wires from the two spools carried by each spindle extension. Furthermore, the guides on the two opposite sides of the machine are connected by a walking-beam at the upper end of the frame, so that as one of them moves upward, the other must move downward to an equal extent; and a lever is provided for effecting this opposite reciprocation of the two guides or shifters. Before each such movement of the guides or shifters, the twisters are all rotated into such positions that their flat central members (the forward extensions of the spindles) are in the central vertical plane of the machine, the plane faces of the spool-carrier castings being likewise of course in vertical planes. When the parts are in this relation, the opposite vertical movement of the two guides or shifters must evidently carry the spool-carriers at one side of the center of the machine downward and those at the opposite side upward; and the shifters are given sufficient movement to transfer each spool-carrier from one spindle to the one next above or below it. It will be understood that in the use of this machine, as in that of any of the others under consideration, only the alternate spindles are provided with spools during any given rotation of the parts, the intermediate spindles being empty. By means of the operation of the guides or shifters just described, the spool-carriers, in the intervals between the periods of rotation, are transferred each time from the full spindles to the empty ones, and this transfer, as in all other machines, remates the wires and effects the formation of the diamond mesh."

Defendant's machine as described in the Whitney patent of December 24, 1895, consisted of a vertical upright bar or support; a series of horizontal tubes set rigidly therein; a series of intermeshing gears mounted and rotating on the tubes, and provided with two projecting studs at the opposite sides of their centers; a set of plates loosely journalled on the tubes, and connected to and rotating with the intermeshing gears, and provided with two projecting spring pins at opposite sides of their centers, a

small distance from the forward projecting studs on the gears; a set of spool-carriers, each mounted on a plate having inclined notches at the diagonal corners on one side, and inclined grooves at the opposite diagonal corners on the other side, so that when one side of the plate is inserted between a gear and its plate one of the studs may pass along a groove on one side, and a spring pin or stud pass into and catch against the notch on the opposite side, and thus retain and support the spool-carrier, as long as the parts are rotated in the same direction; spools for the woof-wires mounted in the spool-carriers, and means for imparting rotation to the intermeshing gears. To transfer the spool-carriers the parts are rotated until the carriers are between the stationary spindles, when the direction of rotation is reversed. This causes a pin and stud on the adjacent gear to enter the empty or unoccupied groove in the carrier plate, and to lift it out of connection with the gear plate with which it had been rotating and to carry it around in its new relation as long as rotation is continued in that direction. To shift it again to bring it into relation with another gear and plate the direction of rotation is again reversed.

Considering the complainants and Whitney as alike having improved on the prior art, the question is whether the specific improvements of the one actionably invaded the domain of the other. The presumption from the grant of the letters patent is that there was a substantial difference between the inventions.

The Circuit Court found these differences between the two machines: That in the Kitselman machine the spool-carriers were shifted from one section to another by sliding them in a straight path; that all the spool-carriers at one side of the spindles were attached together and moved from one section to another by means of a common bar; that the spindles were fastened to the pinions and rotated with them; that the spool-carriers were shifted from one section to another by a hand lever provided for that purpose; that the spool-carriers were required to be supported at both ends; that the spool-carriers could readily be taken out, turned end for end, and reinstated in place again; that the hollow spindle could not be made stationary without destroying the capacity to operate; that the segmental ends of the side sections of the twisters made, with the lateral end pieces of the central sections, wheels at both ends of the twisters, resting in supports, permitting their rotation; and that the spool-carriers could not be transferred except when the parts had been brought to a position of rest and the pinions were stationary.

That on the other hand, in defendant's machine, the spool-carriers rotated through a curvilinear path; that the spool-carriers were each separate from, and moved independently of, the others; that the spindles were fastened to the frame and had the pinions loosely mounted on them, and not rotating with the spindles; that the spool-carriers were shifted without any lever by

reversing the direction of the rotation of the crank; that they were only required to be supported at one end, and could not be taken out, turned end for end, and reinserted; that the spool-carriers could be made rotative instead of stationary; that the ends of the central spindles and the spool-carriers formed no wheels, and were received in no bearings; and that the spool-carriers could only be transferred when they were rotated. Finally, that the spool-carriers in the two machines were so different and mounted and operated in such different ways that they could not be interchanged or transferred from one to the other without reorganization.

We perceive no reason to decline acceptance of these findings of the Circuit Court, and agree with that court in the conclusion that the machines lack that identity of means and identity of operation which must be combined with identity of result to constitute infringement.

As we have before stated, the Circuit Court of Appeals concurred with the Circuit Court that, unless the patents sued on embodied a pioneer invention, the defendant's machine was so differentiated from either of the others that the charge of infringement could not be maintained. The Circuit Court held all complainants' patents to be only improvements on the prior art, and dismissed the bill on the ground of non infringement.

The Circuit Court of Appeals held that the Kitselman patent was entitled to be treated as embodying primary invention and to such liberal construction as brought defendants' machine within it. The decree of the Circuit Court was therefore reversed because, in the opinion of the Circuit Court of Appeals, certain claims of the Kitselman patent were infringed.

For the reasons given in treating of the Kitselman patent we think that none of complainants' patents embodied primary invention, and we concur with both the courts below that, this being so, the differences in means and operation between defendants' machine and the others were such that there was no infringement.

It does not seem necessary for us to enumerate these differences in respect of the other three patents. This was well done in the Circuit Court, and the Circuit Court of Appeals accepted the view of that court as to the absence of infringement if primary invention did not exist. We are content with that conclusion.

*Decree of the Circuit Court of Appeals reversed; decree of the Circuit Court affirmed, and mandate to that court accordingly.*

True copy.

Test:

*Clerk Supreme Court, U. S.*